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Patricia L. Mesuch — Date of Signature: 10/12/05

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	DEAN Jr., et al.	
Serial No.:	10/652,119	Group Art Unit: 2839
Filed:	August 29, 2003	Examiner: PRASAD, C.
For:	MOLDED FIBER OPTIC FERRULE WITH INTEGRALLY FORMED GEOMETRY FEATURES	

APPELLANTS' BRIEF UNDER 37 C.F.R. § 41.37

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Dear Sir:

Appellants' brief is submitted pursuant to the Notice of Appeal filed on August 12, 2005. **Please charge the fee due ($500.00) in connection with this brief, as specified under 37 C.F.R. § 41.20(b)(2), to Deposit Account No. 19-2167. If any additional fee(s) are due for the filing of this brief, then please charge such fees to Deposit Account No. 19-2167.**

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Real Party In Interest:

The real party in interest is Corning Cable Systems LLC.

Related Appeals and Interferences:

There are no pending patent appeals or interferences related to the present appeal.

Status of Claims:

- Claims 1-20 were rejected under 35 U.S.C. sec. 102(b) and Appellants are appealing the Final Rejection of the same.
- Claims 21-23 were rejected under 35 U.S.C. sec. 103(a) and Appellants are appealing the Final Rejection of the same.

Status of Amendments:

Appellants' Amendment after Final Rejection, faxed on May 13, 2005, was entered into the record with the claims as previously presented.

Summary of Claimed Subject Matter:

With reference to the instant specification and drawings, the present invention may be practiced in the form of a ferrule (30) comprising a molded ferrule body (40) including a molded end face (34) and defining a plurality of bores (42) extending through the ferrule body for receiving end portions of respective optical fibers, the ferrule body further defining at least one opening (36) through the molded end face adapted to receive an alignment member (33) for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating ferrule, the opening defining a longitudinal axis

extending at least partially through the ferrule body; and wherein the ferrule body comprises an integrally formed geometry feature (48) on an exterior surface of the ferrule body; and wherein the molded end face is not machined subsequent to molding the ferrule body. See, for example, Figures 2a-14b, and accompanying text for Figures 2a-2d at paragraphs 38-42.

Another embodiment of the present invention provides a ferrule, wherein the ferrule (30) comprises: a molded ferrule body including a molded end face (34) and defining a plurality of bores (42) extending through the ferrule body for receiving end portions of respective optical fibers, the ferrule body further defining at least one opening (36) through the molded end face adapted to receive an alignment member (33) for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating ferrule, the opening defining a longitudinal axis extending at least partially through the ferrule body, the ferrule body further defining a molded geometric reference feature (48) on an exterior surface of the ferrule body; and wherein the molded end face is not machined subsequent to molding the ferrule body; and wherein the geometric reference feature eliminates the need for using a truncated precision measurement pin to determine the angularity of a plane defined by a region of interest on the molded end face of the ferrule body. See, for example, Figures 4b and 11b, and accompanying text at paragraphs 52-53 and 44.

Another embodiment of the present invention provides a multifiber ferrule (30) for a fiber optic connector, the ferrule comprising a molded ferrule body (40) including a molded end face (34) comprising a molded first surface (52) defining a first plane that is generally normal to a

longitudinal axis of the ferrule body, and a molded second surface (54) defining a second plane disposed at a predetermined angle relative to the molded first surface and the longitudinal axis of the ferrule body, the ferrule body further defining a plurality of bores (42) extending through the ferrule body for receiving end portions of respective optical fibers, the ferrule body further defining at least one opening (36) through the molded end face adapted to receive an alignment member (33) for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating multifiber ferrule; and wherein the molded end face is not machined subsequent to molding the ferrule body. See, for example, Figures 11a-14b, and accompanying text at paragraphs 52-59.

A further embodiment of the present invention is directed to amethod for determining the angularity of a plane defined by at least a portion of an end face of a ferrule, wherein the method includes: providing a ferrule (30) having a ferrule body (40), an end face (34) and a geometric reference feature (48) on an exterior surface of the ferrule body proximate the end face and integral with the ferrule body; measuring a reference plane defined by the geometric reference feature (50); measuring the plane defined by the at least a portion of the end face (32) of the ferrule; and determining at least one end face angle based upon an angular difference between the reference plane defined by the geometric reference feature and the plane defined by the at least a portion of the end face of the ferrule. See, for example, paragraph 44 and Figures 4a-4b.

A further embodiment of the present invention is directed to a method of forming a ferrule (30), wherein the method includes: molding a ferrule body (40) comprising an end face (34) and defining a plurality of bores (42)

extending through the ferrule body for receiving end portions of respective optical fibers, the ferrule body also defining at least one opening (36) through the end face adapted to receive a guide pin (33) for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating ferrule, the opening defining a longitudinal axis extending at least partially through the ferrule body; and wherein the ferrule body comprises a geometry feature (48) on an exterior surface of the ferrule body that is formed by molding and is not subsequently machined. See, for example, Figures 2a-14b, and accompanying text for Figures 2a-2d at paragraphs 38-42.

A further embodiment of the present invention is directed to a method of forming a multifiber ferrule (30) for a fiber optic connector, wherein the method includes: molding a ferrule body (40) comprising an end face (34) and defining a plurality of bores (42) extending through the ferrule body for receiving end portions of respective optical fibers, the ferrule body also defining at least one opening (36) through the end face adapted to receive an alignment member (33) for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating multifiber ferrule, the opening defining a longitudinal axis extending at least partially through the ferrule body, the end face comprising a first surface (52) defining a first plane that is generally normal to the longitudinal axis and a second surface (54) defining a second plane disposed at a predetermined angle relative to the first surface and the longitudinal axis of the ferrule body, the ferrule body further comprising an integrally formed geometry feature (48) proximate the end face; and wherein the geometry feature comprises a reference surface

that is accessible for making visual measurements after the alignment member is received within the opening through the end face defined by the ferrule body without the use of an interferometer having 3D capabilities; and wherein the geometry feature eliminates the need for using a truncated precision measurement pin to determine the angularity of a plane defined by a region of interest (32) on the end face. See, for example, Figures, for example, 4b and 11b, and accompanying text at paragraphs 52-53 and 44.

Another embodiment of the present invention provides a fiber optic connection comprising: a first molded ferrule body (40) including a first molded end face (34) and defining a first plurality of bores (42) extending through the first molded ferrule body for receiving end portions of respective optical fibers, the first molded ferrule body further defining at least one opening (36) through the first molded end face adapted to receive an alignment member (33) for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating ferrule, the opening defining a longitudinal axis extending at least partially through the first molded ferrule body, wherein the first molded end face is unmachined; a first plurality of optical fibers positioned in the first plurality of bores; a second molded ferrule body (40) including a second molded end face (34) and defining a second plurality of bores (42) extending through the second molded ferrule body for receiving end portions of respective optical fibers, the second molded ferrule body further defining at least one opening (36) through the end face adapted to receive an alignment member (33) for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating ferrule, the opening defining a longitudinal axis

extending at least partially through the second molded ferrule body, wherein the second molded end face is unmachined; and a second plurality of optical fibers positioned in the second plurality of bores, each of the second plurality of optical fibers in contact with a respective optical fiber of the first plurality of optical fibers. See, for example, text and Figure 6e added in the amendment filed May 13, 2005.

Grounds of Rejection to be Reviewed on Appeal:

(I) Whether claims 1-20 are patentable over U.S. Pat. No. 5,867,621 (the '621 patent) applying 35 U.S.C. sec. 102(b) without a teaching reference.

(II) Whether claims 21-23 are patentable over the '621 patent applying 35 U.S.C. sec. 103(a).

Argument:

I. Applicable Law:

A. 35 U.S.C. sec. 102(b):

35 U.S.C. sec. 102(b) states that a person shall be entitled to a patent unless "the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States". Existence of a public use or on sale bar is to be determined by reference to the *claimed* invention. Orthokinectics, Inc. v. Safety Travel Chairs, Inc. 1 USPQ2 1081 (Fed. Cir. 1986).

B. 35 U.S.C. sec. 103(a):

35 U.S.C. sec. 103(a) imposes the requirement that a claimed invention, to be patentable, must be nonobvious over

the prior art "...at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains..." A *prima facie* case of obviousness is a procedural tool of examination allocating the burdens of going forward as between the Examiner and Applicant. See MPEP Chapter 700, §706.02(j). The Examiner bears the initial burden to make a *prima facie* case. Where a *prima facie* case is not established "then without more the applicant is entitled to grant of the patent." In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1444, 1445 (Fed. Cir. 1992). Additionally, a *prima facie* case requires that the prior art reference (or references when combined) must teach or suggest all of the claim limitations. See MPEP Chapter 700, §706.02(j).

Additionally, a reference must be considered for all it teaches, including disclosures that teach away from the invention as well as disclosures that point toward the invention. In re Kotzab, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of the invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Equally important, there must be concrete evidence in the record to support the objective teaching that suggests or teaches the claimed invention. In re Zurko, 258 F.3d 1379, 1386, 59 USPQ 1693, 1697 (Fed. Cir. 2001).

II. The Final Rejection of claims 1-20 applying the '621 patent under sec. 103(a)

A. The '621 patent does not teach each and every feature of independent claims 1, 4, 12, 14, 17 or 20.

Claims 1-20 were rejected under 35 U.S.C. sec. 102(b) applying US Patent No. 5,867,621 (the '621 patent) without a teaching reference.

Pursuant to paragraphs 2 and 3 of the Office Action dated June 28, 2005, claims 1-20 stand rejected under 35 U.S.C. §102(b) as being fully anticipated by U.S. Patent 5,867,621 (Luther). The Examiner asserts that Luther identically discloses "a multifiber ferrule 38 with a molded ferrule body having a smaller end face 48 with a plurality of bores 52 for receiving ends of optical fibers, at least one opening 50a for receiving alignment members and defining a longitudinal axis wherein the ferrule body comprises an integrally formed geometrical reference feature (a sloped planar surface) between the smaller end face 48 and a larger end face 48 [sic: 44] and *wherein the end face is not machined*. The surface of the smaller end face is perpendicular to the axis and the sloped surface is at [an] angle to the axis. *The sloped surface provides visual measurements for aligning purposes*. The sloped surface forms a bumper extending from the end face 48 of the ferrule. The ferrule body does have a recessed feature formed by *body elements 34* and end face 44. The geometrical reference feature is within an opening in the body and *is not altered through the useful life of the ferrule*. The planes defined by the end face 48 and sloped surface define an angle." Office Action at pages 2-3 (emphasis added).

Applicants respectfully traverse the rejection. Additionally, Applicants respectfully traverse the

statements in the "**Response to Arguments**" paragraph that "Nagasawa et al. do not explicitly disclose that all MTP connectors are polished." Applicants do not believe that this is the threshold question. Nagasawa et al. clearly describe polishing and all the relevant cited art is silent with respect to a molded ferrule that is not subsequently machined. Luther expressly refers to Nagasawa et al. which clearly describes polishing the end face. Applicants believe that Nagasawa et al. do imply that all ferrules have to be polished. Luther does not go into great detail regarding the connector 30 because Luther is directed towards an adapter. Luther provides Nagasawa et al. as examples of ferrules that could be used with the Luther adapter, and Nagasawa et al. do imply that all ferrules are polished. A lack of expressly saying all ferrules are polished with no mention of an unmachined ferrule in the content of describing ferrule polishing does imply that all ferrules are polished using the polishing methods set forth in Nagasawa et al. To suggest that because Nagasawa et al. does not expressly say all ferrules are polished that Nagasawa et al. teach an unmachined ferrule is logically incorrect. The same applies to Luther, Luther does not go into great detail regarding the connector 30 because Luther is directed towards an adapter. However, Luther does not describe or suggest an unmachined ferrule. Applicants hereby respectfully assert that before the instant patent application all molded ferules were subsequently polished, and it is insufficient to reject the presently pending claims using a reference that is silent with respect to an unmachined ferrule.

As stated before, and with respect to independent claims 1, 4 and 12, Luther does not identically disclose a multifiber ferrule comprising a molded ferrule body including a molded end face that is not machined subsequent to molding the ferrule body. With respect to independent claim 17, Luther does not identically disclose a method of forming a ferrule comprising molding a ferrule body having an end face and a geometry feature on an exterior surface of the ferrule body that is formed by molding and is not subsequently machined. Luther merely discloses a conventional MTP connector comprising a ferrule 38 having the structural configuration shown in Fig. 1 and described at column 2, line 66 through column 3, line 8. Nowhere does Luther expressly disclose or inherently suggest that the ferrule 38 is molded *and* neither the end face nor a geometry feature provided on an exterior surface of the ferrule is machined subsequent to molding the ferrule. Applicants concede that it was well known in the fiber optic connector art at the time of the invention to mold a ferrule body for a multifiber ferrule. However, Applicants assert that it was not known in the fiber optic connector art prior to the present invention to mold an end face or a geometry feature on an exterior surface of a ferrule body *without machining* the end face or the geometry feature subsequent to molding the ferrule body. Thus, Luther does not identically disclose the multifiber ferrule of claims 1, 4 and 12 or the method for forming a ferrule of claim 17.

Claims 2-3, 5-11, 13 and 18-19 depend directly or indirectly from patentable base claims 1, 4, 12 and 17, respectfully, and thus, are likewise allowable for at least the same reasons.

With respect to independent claim 14, Luther does not expressly disclose or inherently suggest a method for determining the angularity of a plane defined by at least a portion of an end face of a ferrule. In fact, Luther does not relate in any way to determining or measuring the angularity of the end face of a ferrule relative to a reference surface of any kind. Applicants concede that it was well known in the fiber optic connector art at the time of the invention to utilize a reference plane defined by a truncated precision measurement pin to determine the angularity of the end face of a ferrule relative to the longitudinal axis of the pin. However, Applicants assert that it was not known in the fiber optic connector art prior to the present invention to utilize a geometric reference feature on an exterior surface of the ferrule body to determine the angularity of the end face. Thus, Luther does not identically disclose the method for determining the angularity of an end face of a ferrule of claim 14. Claims 15-16 depend directly or indirectly from patentable base claim 14, and thus, are likewise allowable for at least the same reasons.

With respect to independent claim 20, Luther does not expressly disclose or inherently suggest a method for forming a multifiber ferrule comprising molding a ferrule body comprising an end face and an integrally formed geometry feature proximate the end face wherein the geometry feature comprises a reference surface that is accessible for making visual measurements without the use of an interferometer having 3D capabilities, thereby eliminating the need for using a truncated precision measurement pin to determine the angularity of a plane defined by a region of interest on the end face. In fact, Luther does not relate in any way to determining or measuring the angularity of a

plane defined by the end face of a ferrule relative to a reference surface of any kind. Applicants concede that it was well known in the fiber optic connector art at the time of the invention to utilize a reference plane defined by a truncated precision measurement pin to determine the angularity of the end face of a ferrule relative to the longitudinal axis of the pin. However, Applicants assert that it was not known in the fiber optic connector art prior to the present invention to utilize a reference surface defined by a geometry feature on an exterior surface of the ferrule body to determine the angularity of the end face. Thus, Luther does not identically disclose the method for forming a multifiber ferrule of claim 20.

Furthermore, Applicants submit that Luther does not identically disclose or inherently suggest that the sloped surface (stepped portion 46) formed between large end face 44 and small end face 48 *provides visual measurements for aligning purposes*. In fact, Luther does expressly disclose beginning at column 4, line 26 that "The various floating fits of components of the present invention are allowable because the crucial alignment mechanism of two opposed connectors is the relative locations of guide pin holes 50a, b on large end face 44. As long as ends 94 and 96 of guide pin 93 find the guide pin holes in opposed large faces, the connectors will align with each other." Thus, the sloped surface does not provide visual measurements for aligning purposes because the connectors will align as long as the ends 94, 96 of the guide pins 93 find the guide pin holes 50a, b in the opposed large end faces 44 of the ferrules 38. Additionally, the *ferrule* 38 of Luther does **not** have a recessed feature. The sloped surface protrudes outwardly from the large end face 44 of the ferrule 38. MTP connector

30 has an outer body 40 that slides over inner body 42 at the ferrule end 34 of the connector. In particular, inner body 42 is a portion of the connector 30 and "ferrule 38 is located in inner body 42." Column 2 at line 66. Thus, ferrule 38 does **not** have a recessed feature formed by body elements 34 and end face 44 as the Examiner asserts.

For at least the reasons stated above, Applicants submit that claims 1-20 as presented herein are patentable. Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of claims 1-20 under 35 U.S.C. §102(b).

B. Moreover, the objective evidence of the '760 patent is contrary to the position of the Office Action.

For at least these reasons, the withdrawal of the Final Rejection of claims 1-20 is warranted and respectfully requested.

III. The Final Rejection of claim 21-23 applying the '621 patent under sec. 103(a).

A. The '621 patent does not teach each and every feature of independent claim 21.

It is respectfully submitted that Luther does not describe or suggest the recitations of claim 21. Moreover, Luther does not identically disclose a connection including the molded ferrules as recited in claim 21 wherein the molded ferrules include molded end faces that are unmachined.

Claims 22-23 depend from patentable base claim 21, and thus, are likewise allowable for at least the same reasons.

B. Moreover, the objective evidence of the '621 patent is contrary to the position of the Office Action.

For at least these reasons, the withdrawal of the Final Rejection of claims 21-23 is warranted and respectfully requested.

Conclusion:

In view of the foregoing reasons, Appellants respectfully request that the rejection of claims 1-20 under 35 U.S.C. sec. 102(b) be reversed. Likewise, Appellants respectfully request that the rejection of claims 21-23 under 35 U.S.C. sec. 103(a) be reversed.

Respectfully submitted,

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Date: 10/12/05

CLAIMS APPENDIX:

1. (previously presented) A ferrule, comprising:

a molded ferrule body including a molded end face and defining a plurality of bores extending through the ferrule body for receiving end portions of respective optical fibers, the ferrule body further defining at least one opening through the molded end face adapted to receive an alignment member for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating ferrule, the opening defining a longitudinal axis extending at least partially through the ferrule body; and

wherein the ferrule body comprises an integrally formed geometry feature on an exterior surface of the ferrule body; and

wherein the molded end face is not machined subsequent to molding the ferrule body.

2. (previously presented) The ferrule of claim 1, wherein the geometry feature is selected from the group consisting of a geometric reference feature, a reference datum, a measurement datum, a polishing angle, and the molded end face, wherein the molded end face comprises a first surface and a second surface, and wherein the first surface is normal to the longitudinal axis defined by the opening and the second surface is disposed at a predetermined angle relative to the first surface and the longitudinal axis.

3. (previously presented) The ferrule of claim 1 further comprising at least one bumper extending from the molded end face.

4. (previously presented) A ferrule, comprising:

a molded ferrule body including a molded end face and defining a plurality of bores extending through the ferrule body for receiving end portions of respective optical fibers, the ferrule body further defining at least one opening through the molded end face adapted to receive an alignment member for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating ferrule, the opening defining a longitudinal axis extending at least partially through the ferrule body, the ferrule body further defining a molded geometric reference feature on an exterior surface of the ferrule body; and

wherein the molded end face is not machined subsequent to molding the ferrule body; and

wherein the geometric reference feature eliminates the need for using a truncated precision measurement pin to determine the angularity of a plane defined by a region of interest on the molded end face of the ferrule body.

5. (previously presented) The ferrule of claim 4, further comprising at least one bumper extending outwardly from the molded end face of the ferrule body.

6. (previously presented) The ferrule of claim 5, wherein the geometric reference feature is located on the at least one bumper.

7. (previously presented) The ferrule of claim 4, wherein the geometric reference feature is recessed on the ferrule body relative to the molded end face.

8. (previously presented) The ferrule of claim 4, wherein the geometric reference feature protrudes from the molded end face.

9. (previously presented) The ferrule of claim 4, wherein the geometric reference feature is disposed within the at least one opening.

10. (previously presented) The ferrule of claim 4, wherein the geometric reference feature is accessible for making visual measurements when the alignment member is received within the opening through the molded end face without the use of an interferometer having 3D capabilities.

11. (previously presented) The ferrule of claim 4, wherein the geometric reference feature is not altered throughout the useful life of the ferrule.

12. (previously presented) A multifiber ferrule for a fiber optic connector, the ferrule comprising:

a molded ferrule body including a molded end face comprising a molded first surface defining a first plane that is generally normal to a longitudinal axis of the ferrule body, and a molded second surface defining a second plane disposed at a predetermined angle relative to the molded first surface and the longitudinal axis of the ferrule body, the ferrule body further defining a plurality of bores extending through the ferrule body for receiving end portions of respective optical fibers, the ferrule body further defining at least one opening through the molded end face adapted to receive an alignment member for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating multifiber ferrule; and

wherein the molded end face is not machined subsequent to molding the ferrule body.

13. (previously presented) The multifiber ferrule of claim 12, further comprising a geometric reference feature operable for measuring the angularity of a plane defined by a region of interest on the molded end face; and

wherein the geometric reference feature is accessible for making visual measurements after assembly of the fiber optic connector without the use of an interferometer having 3D capabilities, thereby eliminating the need for using a truncated precision measurement pin to measure the angularity of the plane defined by the region of interest on the molded end face.

14. (previously presented) A method for determining the angularity of a plane defined by at least a portion of an end face of a ferrule, comprising:

providing a ferrule having a ferrule body, an end face and a geometric reference feature on an exterior surface of the ferrule body proximate the end face and integral with the ferrule body;

measuring a reference plane defined by the geometric reference feature;

measuring the plane defined by the at least a portion of the end face of the ferrule; and

determining at least one end face angle based upon an angular difference between the reference plane defined by the geometric reference feature and the plane defined by the at least a portion of the end face of the ferrule.

15. (previously presented) The method of claim 14, wherein the geometric reference feature is accessible during the measuring steps for making visual measurements without the use of an interferometer having 3D capabilities.

16. (previously presented) The method of claim 14, wherein the measuring steps eliminate the need for using a truncated precision measurement pin to determine the end face angle of the ferrule.

17. (previously presented) A method of forming a ferrule, comprising:

molding a ferrule body comprising an end face and defining a plurality of bores extending through the ferrule body for receiving end portions of respective optical fibers, the ferrule body also defining at least one opening through the end face adapted to receive a guide pin for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating ferrule, the opening defining a longitudinal axis extending at least partially through the ferrule body; and

wherein the ferrule body comprises a geometry feature on an exterior surface of the ferrule body that is formed by molding and is not subsequently machined.

18. (previously presented) The method of claim 17 wherein the geometry feature is accessible for making visual measurements without the use of an interferometer having 3D capabilities, thereby eliminating the need for using a truncated precision measurement pin to determine the angularity of at least a portion of the end face of the ferrule.

19. (previously presented) The method of claim 17, wherein the geometry feature is selected from the group consisting of a geometric reference feature, a reference datum, a measurement datum, a polishing angle, and an end face comprising a first surface and a second surface, wherein the first surface is generally normal to the longitudinal axis and the second surface is disposed at a predetermined angle relative to the first surface and the longitudinal axis.

20. (previously presented) A method of forming a multifiber ferrule for a fiber optic connector, comprising:

molding a ferrule body comprising an end face and defining a plurality of bores extending through the ferrule body for receiving end portions of respective optical fibers, the ferrule body also defining at least one opening through the end face adapted to receive an alignment member for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating multifiber ferrule, the opening defining a longitudinal axis extending at least partially through the ferrule body, the end face comprising a first surface defining a first plane that is generally normal to the longitudinal axis and a second surface defining a second plane disposed at a predetermined angle relative to the first surface and the longitudinal axis of the ferrule body, the ferrule body further comprising an integrally formed geometry feature proximate the end face; and

wherein the geometry feature comprises a reference surface that is accessible for making visual measurements after the alignment member is received within the opening through the end face defined by the ferrule body without the use of an interferometer having 3D capabilities; and

wherein the geometry feature eliminates the need for using a truncated precision measurement pin to determine the angularity of a plane defined by a region of interest on the end face.

21. (previously presented) A fiber optic connection comprising:

a first molded ferrule body including a first molded end face and defining a first plurality of bores extending through the first molded ferrule body for receiving end portions of respective optical fibers, the first molded ferrule body further defining at least one opening through the first molded end face adapted to receive an alignment member for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating ferrule, the opening defining a longitudinal axis extending at least partially through the first molded ferrule body, wherein the first molded end face is unmachined;

a first plurality of optical fibers positioned in the first plurality of bores;

a second molded ferrule body including a second molded end face and defining a second plurality of bores extending through the second molded ferrule body for receiving end portions of respective optical fibers, the second molded ferrule body further defining at least one opening through the end face adapted to receive an alignment member for aligning the end portions of the respective optical fibers with corresponding end portions of optical fibers of a mating ferrule, the opening defining a longitudinal axis extending at least partially through the second molded ferrule body, wherein the second molded end face is unmachined; and

a second plurality of optical fibers positioned in the second plurality of bores, each of the second plurality of optical fibers in contact with a respective optical fiber of the first plurality of optical fibers.

22. (previously presented) A connection in accordance with Claim 21 further comprising:

at least one first bumper extending from the first molded end face; and

at least one second bumper extending from the second molded end face.

23. (previously presented) A connection in accordance with Claim 21 further comprising:

a first integrally formed geometry feature on an exterior surface of the first molded ferrule body; and

a second integrally formed geometry feature on an exterior surface of the second molded ferrule body.

Evidence Appendix:

None

Related Proceedings Appendix:

None